Index to Volume 98 | July–December 1999

titles

Calamity at Meteor Crater, *David A. Kring,* 5:48
Forecasting Martian Halos, *Les T. Cowley* and *Michael Schroeder,* 6:60
Galileo: An Image Gallery III, *J. Kelly Beatty,* 1:40
How We'll Deliver Chandra to Orbit, *Steven A. Hawley,* 2:54
In Search of Martian Seas, *J. Kelly Beatty,* 5:38
Interconnected Universe? An: Exploring the Topology of the Cosmos, *Dan Falk,* 1:44
Interplanetary Infestations, *Paul Davies,* 3:32
Leonardo da Vinci and the Moon, *Barbara L. Welther,* 4:40
Leonid Meteor Storm, The: Is This the Year? *Joe Rao,* 5:28
Life at the Limit, *J. Kelly Beatty,* 3:40
Life of a Neutron Star, The, *Joshua N. Winn,* 1:30
Lives of Stars, The, *Carolyn Collins Petersen,* 3:50
NASA's Chandra X-ray Observatory: A Revolution Through Resolution, *Martin Elvis,* 2:44
Radio Astronomy's Resolution Machine: The Very Long Baseline Array, *James Ulvestad* and *Miller Goss,* 6:36
Race to Map the Microwave Background, The, *Joshua Roth,* 3:44
Solar-Stellar Connection, The, *Bernhard Haisch* and *Jürgen Schmitt,* 4:46
Supernovae, Neutrinos, and Amateur Astronomers, *Leif J. Robinson,* 2:30
Torino Scale, The: Gauging the Impact Threat, *J. Kelly Beatty,* 4:32
25 Hot New Products of 1999, 6:48
X-ray Astronomy's Golden Age, *Martin Still,* 2:56

authors

Aguirre, Edwin L., The Great Total Eclipse, 5:118
  Guide to Astronomical Inns, A, 2:84
  Imaging Totality, 1:136
Aguirre, Edwin L., and *Imelda B. Joson,* Our Stairway to the Stars, 6:136
Arana, Louis R., letter, 2:12
Atkinson, Stuart, Memories of Mir, 6:10
Batterson, Jeremy D., letter, 3:16
Baum, William A., letter, 1:12
Beatty, J. Kelly, book review, 3:84
  Galileo: An Image Gallery III, 1:40
  In Search of Martian Seas, 5:38
  Life at the Limit, 3:40
  Torino Scale, The: Gauging the Impact Threat, 4:32
Benjamin, Mel, letter, 5:14
Berry, Richard, book review, 5:77
Bone, Clyde, The Mersenne Telescope, 3:130
Boyadjian, Hayg, letter, 6:12
Buchroeder, Richard A., book review, 4:76
Cook, Chris, Less Magnification for Photography, 1:67
Cowley, Les T., and *Michael Schroeder,* Forecasting Martian Halos, 6:60
Crinklaw, Greg, letter, 1:14
Dantowitz, Ron, "Telescope, Can You Hear Me?" 6:66
Danziger, Alan, letter, 1:14
Davies, Paul, Interplanetary Infestations, 3:32
Del Chamberlain, Von, book review, 5:79
di Cicco, Dennis, A First Look: SBIG's Enhanced ST-7E CCD Camera, 2:64
  Robotic Telescopes for the Masses, 3:64
  There's No Place Like Home, 5:137
  Think Big (and Small), 6:133
Dobbins, Thomas, and *William Sheehan,* Jupiter's Deep Mystery, 6:118
Dunlop, Storm, letter, 1:14
Dyer, Alan. A Trio of Refractors, 5:57
East, George, More Magnification for Observing, 1:66
Ehmann, James, Lonesome in a Crowd, 5:10
Elvis, Martin, NASA's Chandra X-ray Observatory: A Revolution Through Resolution, 2:44
Falk, Dan, An Interconnected Universe? Exploring the Topology of the Cosmos, 1:44
Francis, John, New Twist on Tilted-Mirror Telescopes, 1:128
French, Sue, Small-Scope Sampler, 1:101, 2:101, 3:101, 4:101, 5:101, 6:101
Garlitz, Joe, letter, 2:12
Gavin, Maurice, Cosmic Rainbows: The Revival of Amateur Spectroscopy, 2:135
Goldman, Stuart J., Astronomy Online, 1:75, 2:73, 3:80, 4:73, 5:72, 6:70
  book review, 2:78, 6:82
  Software by Internet, 5:67
  Wish List Revisited, 3:75
Goldsmith, Donald, book review, 2:80
Goss, Miller, see *Ulvestad, James*
Gottlieb, Steve, Deep-Sky Notebook, 4:123
Graney, Chris, letter, 6:14
Gurshtein, Alexander A., letter, 2:14, 3:14
Haaland, Aina, letter, 6:12
Haisch, Bernhard, and *Jürgen Schmitt,* The Solar-Stellar Connection, 4:46
Hanon, David, software review, 1:70
Hawley, Steven A., How We'll Deliver Chandra to Orbit, 2:54
Hewitt-White, Ken, book review, 1:80
Hutchings, John, letter, 5:12
Jakiel, Richard, Deep-Sky Notebook, 6:126
Jasinski, Laurie E., see *Olson, Donald W.*
Johnson, Gus E., letter, 3:16
Johnson, Lee, book review, 1:78
Joson, Imelda B., see *Aguirre, Edwin L.*
Kirkland, Gordon, Star Party Crasher, 1:10
Knisely, David, An Unexpected Star Party, 2:10
Krajci, Tom, A Balancing Act for Dobsonian Telescopes, 5:130
Kring, David A., Calamity at Meteor Crater, 5:48
Krupp, E.C., Rambling Through the Skies, 1:93, 2:95, 3:93, 4:93, 5:95, 6:92
LePage, Andrew, see *MacRobert, Alan M.*
Levy, David H., Star Trails, 1:89, 2:91, 3:89, 4:88, 5:89, 6:88
Lewis, Martin, Improving Dobsonian Motion, 4:128
MacRobert, Alan M., A Magnetic Star-Finding Machine, 3:68
  Observatory with Sails, An, 6:140
  Planning Your Leonid Watch, 5:33
  Solar Filters: Which Is Best? 1:63
  Star-Hop in the Scutum Milky Way, A, 3:108
  What You See and What You Get, 4:70
MacRobert, Alan M., and *Andrew J. LePage,* SETI@ home: Catching the Wave, 4:68
Malin, David F., Images, 1:58
McClure, Bruce, letter, 5:14
McDowell, Jonathan, Mission Update, 1:28, 2:28, 3:30, 4:30, 5:26, 6:28
McNeil, Jay, Deep-Sky Notebook, 2:122, 3:124
Meeus, Jean, Shadow Painting the Globe, 2:69
Mihalas, Dimitri, book review, 4:79
Moore, David M., Video of the Stars, 2:61
Mosley, John, Screen Shot, 1:74, 2:72, 3:78, 4:72, 5:70, 6:69
Mullaney, James, Deep-Sky Notebook, 5:124
Nakamoto, David, An Amateur's Night on Mount Wilson, 1:115
O'Brien, Sean, letter, 6:12
Ocampo, Adriana C., letter, 1:12
O'Farrell, John, see *Schur, Chris*
Olkovick, Lance, Making the Mirror, 2:132
Olson, Donald W., and *Laurie E. Jasinski,* Abe Lincoln and the Leonids, 5:34
O'Meara, Stephen James, An Assembly of Good Fellows, 6:85
  Chasing Eclipse Mysteries, 5:121
  Sky Within, The, 4:84
  Strange Eclipses, 2:116
  Unique Temple to the Sun, A, 1:84
Ondra, Leos, letter, 6:14
Petersen, Carolyn Collins, The Lives of Stars, 3:50
Poitevin, Patrick, letter, 5:12
Poorman, Larry, letter, 6:14
Rao, Joe, The Eclipse Outside of Totality, 2:108
  Leonid Meteor Storm, The: Is This the Year? 5:28
Reid, Paul, letter, 5:12
Robinson, Leif J., A Field Guide to Supernovae Spectra, 2:140
  Spectrum, 1:8, 2:8, 3:8, 4:8, 5:8, 6:8
  Supernovae, Neutrinos, and Amateur Astronomers, 2:30
Rogers, David, Binocular Doubles for Autumn Skies, 4:118
Roman, Nancy Grace, letter, 1:14
Roth, Joshua, My Moveable Feast (An Observatory Alternative), 6:141
  Race to Map the Microwave Background, The, 3:44
Ryan, Jay, SkyWise, 1:112, 2:114, 3:116, 4:116, 5:116, 6:116
Santini, Barry, letter, 4:14
Schaaf, Fred, Beginnings True and False, 6:98
  Fall's Stellar Migrations, 4:98
  Home in the Milky Way, 2:98
  Little Patterns of Lingering Summer, 3:98
  Somber Skies of November, The, 5:98
  Southern Hemisphere Sky, 1:106, 2:106, 3:106, 4:106, 5:106, 6:106
  Summer's Battling Constellations, 1:98
  Sun, Moon, and Planets, The, 1:103, 2:103, 3:103, 4:103, 5:103, 6:103
Schaefer, Bradley E., book review, 6:77
Schmitt, Jürgen, see *Haisch, Bernhard*
Schroeder, Michael, see *Cowley, Les T.*
Schulze-Frerichs, Klaus, letter, 4:12
Schur, Chris and *John O'Farrell,* Improve Your Astrophotos by Combining Images, 4:135
Seronik, Gary, Binocular Highlight, 1:100, 2:100, 3:100, 4:100, 5:100, 6:100
  Mars Takes Center Stage, 1:124
  Meade's ETX-125EC — A First Look, 4:61
  Observatories of *Sky & Telescope,* The, 6:133
  Opposing Crescent Moon Record, 3:128
  Seeking Himalia, 6:127
  Serendipitous Discovery, A, 4:126
  Two Comets and a Globular, 2:124
Sheehan, William and *Thomas Dobbins,* The TLP Myth: A Brief for the Prosecution, 3:118

Index to Volume 98 | July–December 1999

titles

Calamity at Meteor Crater, *David A. Kring,* 5:48
Forecasting Martian Halos, *Les T. Cowley* and *Michael Schroeder,* 6:60
Galileo: An Image Gallery III, *J. Kelly Beatty,* 1:40
How We'll Deliver Chandra to Orbit, *Steven A. Hawley,* 2:54
In Search of Martian Seas, *J. Kelly Beatty,* 5:38
Interconnected Universe? An: Exploring the Topology of the Cosmos, *Dan Falk,* 1:44
Interplanetary Infestations, *Paul Davies,* 3:32
Leonardo da Vinci and the Moon, *Barbara L. Welther,* 4:40
Leonid Meteor Storm, The: Is This the Year? *Joe Rao,* 5:28
Life at the Limit, *J. Kelly Beatty,* 3:40
Life of a Neutron Star, The, *Joshua N. Winn,* 1:30
Lives of Stars, The, *Carolyn Collins Petersen,* 3:50
NASA's Chandra X-ray Observatory: A Revolution Through Resolution, *Martin Elvis,* 2:44
Radio Astronomy's Resolution Machine: The Very Long Baseline Array, *James Ulvestad* and *Miller Goss,* 6:36
Race to Map the Microwave Background, The, *Joshua Roth,* 3:44
Solar-Stellar Connection, The, *Bernhard Haisch* and *Jürgen Schmitt,* 4:46
Supernovae, Neutrinos, and Amateur Astronomers, *Leif J. Robinson,* 2:30
Torino Scale, The: Gauging the Impact Threat, *J. Kelly Beatty,* 4:32
25 Hot New Products of 1999, 6:48
X-ray Astronomy's Golden Age, *Martin Still,* 2:56

authors

Aguirre, Edwin L., The Great Total Eclipse, 5:118
  Guide to Astronomical Inns, A, 2:84
  Imaging Totality, 1:136
Aguirre, Edwin L., and *Imelda B. Joson,* Our Stairway to the Stars, 6:136
Arana, Louis R., letter, 2:12
Atkinson, Stuart, Memories of Mir, 6:10
Batterson, Jeremy D., letter, 3:16
Baum, William A., letter, 1:12
Beatty, J. Kelly, book review, 3:84
  Galileo: An Image Gallery III, 1:40
  In Search of Martian Seas, 5:38
  Life at the Limit, 3:40
  Torino Scale, The: Gauging the Impact Threat, 4:32
Benjamin, Mel, letter, 5:14
Berry, Richard, book review, 5:77
Bone, Clyde, The Mersenne Telescope, 3:130
Boyadjian, Hayg, letter, 6:12
Buchroeder, Richard A., book review, 4:76
Cook, Chris, Less Magnification for Photography, 1:67
Cowley, Les T., and *Michael Schroeder,* Forecasting Martian Halos, 6:60
Crinklaw, Greg, letter, 1:14
Dantowitz, Ron, "Telescope, Can You Hear Me?" 6:66
Danziger, Alan, letter, 1:14
Davies, Paul, Interplanetary Infestations, 3:32
Del Chamberlain, Von, book review, 5:79
di Cicco, Dennis, A First Look: SBIG's Enhanced ST-7E CCD Camera, 2:64
  Robotic Telescopes for the Masses, 3:64
  There's No Place Like Home, 5:137
  Think Big (and Small), 6:133
Dobbins, Thomas, and *William Sheehan,* Jupiter's Deep Mystery, 6:118
Dunlop, Storm, letter, 1:14
Dyer, Alan. A Trio of Refractors, 5:57
East, George, More Magnification for Observing, 1:66
Ehmann, James, Lonesome in a Crowd, 5:10
Elvis, Martin, NASA's Chandra X-ray Observatory: A Revolution Through Resolution, 2:44
Falk, Dan, An Interconnected Universe? Exploring the Topology of the Cosmos, 1:44
Francis, John, New Twist on Tilted-Mirror Telescopes, 1:128
French, Sue, Small-Scope Sampler, 1:101, 2:101, 3:101, 4:101, 5:101, 6:101
Garlitz, Joe, letter, 2:12
Gavin, Maurice, Cosmic Rainbows: The Revival of Amateur Spectroscopy, 2:135
Goldman, Stuart J., Astronomy Online, 1:75, 2:73, 3:80, 4:73, 5:72, 6:70
  book review, 2:78, 6:82
  Software by Internet, 5:67
  Wish List Revisited, 3:75
Goldsmith, Donald, book review, 2:80
Goss, Miller, see *Ulvestad, James*
Gottlieb, Steve, Deep-Sky Notebook, 4:123
Graney, Chris, letter, 6:14
Gurshtein, Alexander A., letter, 2:14, 3:14
Haaland, Aina, letter, 6:12
Haisch, Bernhard, and *Jürgen Schmitt,* The Solar-Stellar Connection, 4:46
Hanon, David, software review, 1:70
Hawley, Steven A., How We'll Deliver Chandra to Orbit, 2:54
Hewitt-White, Ken, book review, 1:80
Hutchings, John, letter, 5:12
Jakiel, Richard, Deep-Sky Notebook, 6:126
Jasinski, Laurie E., see *Olson, Donald W.*
Johnson, Gus E., letter, 3:16
Johnson, Lee, book review, 1:78
Joson, Imelda B., see *Aguirre, Edwin L.*
Kirkland, Gordon, Star Party Crasher, 1:10
Knisely, David, An Unexpected Star Party, 2:10
Krajci, Tom, A Balancing Act for Dobsonian Telescopes, 5:130
Kring, David A., Calamity at Meteor Crater, 5:48
Krupp, E.C., Rambling Through the Skies, 1:93, 2:95, 3:93, 4:93, 5:95, 6:92
LePage, Andrew, see *MacRobert, Alan M.*
Levy, David H., Star Trails, 1:89, 2:91, 3:89, 4:88, 5:89, 6:88
Lewis, Martin, Improving Dobsonian Motion, 4:128
MacRobert, Alan M., A Magnetic Star-Finding Machine, 3:68
  Observatory with Sails, An, 6:140
  Planning Your Leonid Watch, 5:33
  Solar Filters: Which Is Best? 1:63
  Star-Hop in the Scutum Milky Way, A, 3:108
  What You See and What You Get, 4:70
MacRobert, Alan M., and *Andrew J. LePage,* SETI@ home: Catching the Wave, 4:68
Malin, David F., Images, 1:58
McClure, Bruce, letter, 5:14
McDowell, Jonathan, Mission Update, 1:28, 2:28, 3:30, 4:30, 5:26, 6:28
McNeil, Jay, Deep-Sky Notebook, 2:122, 3:124
Meeus, Jean, Shadow Painting the Globe, 2:69
Mihalas, Dimitri, book review, 4:79
Moore, David M., Video of the Stars, 2:61
Mosley, John, Screen Shot, 1:74, 2:72, 3:78, 4:72, 5:70, 6:69
Mullaney, James, Deep-Sky Notebook, 5:124
Nakamoto, David, An Amateur's Night on Mount Wilson, 1:115
O'Brien, Sean, letter, 6:12
Ocampo, Adriana C., letter, 1:12
O'Farrell, John, see *Schur, Chris*
Olkovick, Lance, Making the Mirror, 2:132
Olson, Donald W., and *Laurie E. Jasinski,* Abe Lincoln and the Leonids, 5:34
O'Meara, Stephen James, An Assembly of Good Fellows, 6:85
  Chasing Eclipse Mysteries, 5:121
  Sky Within, The, 4:84
  Strange Eclipses, 2:116
  Unique Temple to the Sun, A, 1:84
Ondra, Leos, letter, 6:14
Petersen, Carolyn Collins, The Lives of Stars, 3:50
Poitevin, Patrick, letter, 5:12
Poorman, Larry, letter, 6:14
Rao, Joe, The Eclipse Outside of Totality, 2:108
  Leonid Meteor Storm, The: Is This the Year? 5:28
Reid, Paul, letter, 5:12
Robinson, Leif J., A Field Guide to Supernovae Spectra, 2:140
  Spectrum, 1:8, 2:8, 3:8, 4:8, 5:8, 6:8
  Supernovae, Neutrinos, and Amateur Astronomers, 2:30
Rogers, David, Binocular Doubles for Autumn Skies, 4:118
Roman, Nancy Grace, letter, 1:14
Roth, Joshua, My Moveable Feast (An Observatory Alternative), 6:141
  Race to Map the Microwave Background, The, 3:44
Ryan, Jay, SkyWise, 1:112, 2:114, 3:116, 4:116, 5:116, 6:116
Santini, Barry, letter, 4:14
Schaaf, Fred, Beginnings True and False, 6:98
  Fall's Stellar Migrations, 4:98
  Home in the Milky Way, 2:98
  Little Patterns of Lingering Summer, 3:98
  Somber Skies of November, The, 5:98
  Southern Hemisphere Sky, 1:106, 2:106, 3:106, 4:106, 5:106, 6:106
  Summer's Battling Constellations, 1:98
  Sun, Moon, and Planets, The, 1:103, 2:103, 3:103, 4:103, 5:103, 6:103
Schaefer, Bradley E., book review, 6:77
Schmitt, Jürgen, see *Haisch, Bernhard*
Schroeder, Michael, see *Cowley, Les T.*
Schulze-Frerichs, Klaus, letter, 4:12
Schur, Chris and *John O'Farrell,* Improve Your Astrophotos by Combining Images, 4:135
Seronik, Gary, Binocular Highlight, 1:100, 2:100, 3:100, 4:100, 5:100, 6:100
  Mars Takes Center Stage, 1:124
  Meade's ETX-125EC — A First Look, 4:61
  Observatories of *Sky & Telescope,* The, 6:133
  Opposing Crescent Moon Record, 3:128
  Seeking Himalia, 6:127
  Serendipitous Discovery, A, 4:126
  Two Comets and a Globular, 2:124
Sheehan, William and *Thomas Dobbins,* The TLP Myth: A Brief for the Prosecution, 3:118

see also *Dobbins, Thomas*
Sills, Robert, letter, 6:14
Singer, Harvey, An Ice-Cream Soda and a Beer, 3:10
Sinnott, Roger W., July's Partial Eclipse of the Moon, 1:108
Late September's Occultation of Aldebaran, 4:114
My "Flapping Roof" Observatory, 6:138
Outer Moons of the Outer Planets, 4:109
Treasure-Trove of Variable Stars, A, 6:108
Siren, Jan C., letter, 3:16
Steel, Duncan, letter, 4:12
book review, 6:79
Steffey, Philip C., letter, 3:14
Still, Martin, X-ray Astronomy's Golden Age, 2:56
Ting, Ed, Confessions of a Telescope Junkie, 4:10
Title, Alan M., Images, 4:56
Ulvestad, James, and *Miller Goss*, Radio Astronomy's Resolution Machine: The Very Long Baseline Array, 6:36
Veilleux, Sylvain, Images, 3:56
Welther, Barbara L., Leonardo da Vinci and the Moon, 4:40
Westervelt, Vern, letter, 2:12
Westfall, John E., Your Guide to November's Transit of Mercury, 5:108
Whitman, Alan, Deep-Sky Notebook, 1:119
Williams, Thomas R., Telescopes, Marriages, and Mars: The Life of John E. Mellish, 5:84
Winn, Joshua N., The Life of a Neutron Star, 1:30
Wolanski, Gary, The Wolanski Ultralight Telescope, 2:128
Wood, Charles A., Lunar Notebook, 1:122, 2:120, 3:127, 4:122, 5:126, 6:124

departments

Amateur Astronomers —
Amateur Events, 1:91, 2:92, 3:91, 4:90, 5:91
Assembly of Good Fellows, An, 6:85
Guide to Astronomical Inns, A, 2:84
Sky Within, The, 4:84
Star Trails, 1:89, 2:91, 3:89, 4:88, 5:89, 6:88
Telescopes, Marriages, and Mars: The Life of John E. Mellish, 5:84
Unique Temple to the Sun, A, 1:84
Astro Imaging —
Cosmic Rainbows: The Revival of Amateur Spectroscopy, 2:135
Field Guide to Supernova Spectra, A, 2:140
Gallery, 1:142, 2:142, 3:134, 4:142, 5:144, 6:144
Imaging Totality, 1:136
Improve Your Astrophotos by Combining Images, 4:135
There's No Place Like Home, 5:137
Books & Beyond —
Alien Life: The Search for Extraterrestrials and Beyond, Barry Parker, 3:84
Amateur Telescope Making, Stephen F. Tonkin, 5:77
Astronomical Equipment for Amateurs, Martin Mobberley, 5:77
Briefly Noted, 1:82, 2:82, 4:81, 5:80
Dark Life: Martian Nanobacteria, Rock-Eating Cave Bugs, and Other Extreme Organisms of Inner Earth and Outer Space, Michael Ray Taylor, 3:84
Deep Hot Biosphere, The, Thomas Gold, 3:84
Encyclopedia of the Solar System, Paul R. Weissman, Lucy-Ann McFadden, Torrence V. Johnson, 2:80
Exodus to Arthur: Catastrophic Encounters with Comets, Mike Baillie, 6:79
Exploring the Moon: The Apollo Expeditions, David M. Harland, 2:78
Fanfare for Earth: The Origin of Our Planet and Life, Harry Y. McSween Jr., 3:84
Fifth Miracle, The: The Search for the Origin and Meaning of Life, Paul Davies, 3:84
From White Dwarfs to Black Holes: The Legacy of S. Chandrasekhar, G. Srinivasan, 4:79
Full Moon, Michael Light, 2:78
Legends of the Earth, Sea, and Sky: An Encyclopedia of Nature Myths, Tamra Andrews, 5:79
Life Beyond Earth, Timothy Ferris, 6:82
Life on Mars: The Complete Story, Paul Chambers, 3:84
Life on Other Worlds: The 20th-Century Extraterrestrial Life Debate, Steven J. Dick, 3:84
New Solar System, The, Fourth Edition, J. Kelly Beatty, Carolyn Collins Petersen, and Andrew Chaikin, 2:80
Night Sky Observer's Guide, The, George Robert Kepple and Glen W. Sanner, 1:78
Planetary Dreams: The Quest to Discover Life Beyond Earth, Robert Shapiro, 3:84
Reflecting Telescope Optics I & II, Raymond N. Wilson, 4:76
Sky Atlas 2000.0, Second Edition, Wil Tirion and Roger W. Sinnott, 1:80
Search for Life on Other Planets, The, Bruce Jakosky, 3:84
Star of Bethlehem, The: The Legacy of the Magi, Michael R. Molnar, 6:77
Celestial Calendar —
Calendar Notes, 1:112, 2:113, 3:115, 4:115, 5:114, 6:115
Eclipse Outside of Totality, The, 2:108
July's Partial Eclipse of the Moon, 1:108
Jupiter's Satellites, 1:111, 2:112, 3:114, 4:112, 5:113, 6:114
Late September's Occultation of Aldebaran, 4:114
Outer Moons of the Outer Planets, 4:109
Saturn's Satellites, 1:113, 2:111, 3:113, 4:113, 5:112, 6:115
SkyWise, 1:112, 2:114, 3:116, 4:116, 5.116, 6:116
Star-Hop in the Scutum Milky Way, A, 3:108
Treasure-Trove of Variable Stars, A, 6:108
Your Guide to November's Transit of Mercury, 5:108
Computers in Astronomy —
Astronomy Online, 1:75, 2:73, 3:80, 4:73, 5:72, 6:70
Screen Shot, 1:74, 2:72, 3:78, 4:72, 5:70, 6:69
SETI@home: Catching the Wave, 4:68
Shadow Painting the Globe, 2:69
Software by Internet, 5:67
S&T Test Report: "Telescope, Can You Hear Me?" 6:66
S&T Test Report: Under One Roof, 1:70
Wish List Revisited, 3:75
50 & 25 Years Ago, 1:14, 2:14, 3:12, 4:14, 5:14, 6:14
Focal Point —
Confessions of a Telescope Junkie, 4:10
Ice-Cream Soda and a Beer, An, 3:10
Lonesome in a Crowd, 5:10
Memories of Mir, 6:10
Star Party Crasher, 1:10
Unexpected Star Party, An, 2:10
Guide to the Evening Sky —
Beginnings True and False, 6:98
Binocular Highlight, 1:100, 2:100, 3:100, 4:100, 5:100, 6:100
Fall's Stellar Migrations, 4:98
Home in the Milky Way, 2:98
Light-Pollution Notes: Eyes on New Jersey, 2:104
Light-Pollution Notes: Wake-up Call, 4:104
Little Patterns of Lingering Summer, 3:98
Near Sky, The: Coronas — Part 1, 5:104
Near Sky, The: Coronas — Part 2, 6:104
Near Sky, The: Exotic Names and Effects, 1:104
Near Sky, The: Scintillating Planets, 3:104
Northern Hemisphere Sky Map, 1:99, 2:99, 3:99, 4:99, 5:99, 6:99
Small-Scope Sampler: Cuddling Up to the Scorpion, 1:101
Small-Scope Sampler: Exploring the Den of the Fox, 3:101
Small-Scope Sampler: Follow That Swan! 4:101
Small-Scope Sampler: A Queen's Ransom, 6:101
Small-Scope Sampler: A Summer Steam Bath, 2:101
Small-Scope Sampler: Treasures of the Royal Couple, 5:101
Somber Skies of November, The, 5:98
Southern Hemisphere Sky Map, 1:106, 2:106, 3:106, 4:106, 5:106, 6:106
Summer's Battling Constellations, 1:98
Sun, Moon, & Planets, The, 1:103, 2:103, 3:103, 4:103, 5:103, 6:103
Images, 1:58, 3:56, 4:56
Letters, 1:12, 2:12, 3:14, 4:12, 5:12, 6:12
Mission Update, 1:28, 2:28, 3:30, 4:30, 5:26, 6:28
New Product Showcase, 1:68, 3:73, 4:66, 5:64
News Notes —
Accelerating Universe? An: Not So Fast, 6:18
Alternative to Acceleration? An, 2:24
Amateurs Alleviate Asteroid Threat, 4:17
Another Binary Brown Dwarf, 2:17
Another Black-Hole-Bearing Galaxy, 4:22
Another Way to Weigh Neutrinos? 6:26
Antimatter Finding Has Cosmological Implications, 4:27
Antu Eyes Interacting Galaxies, 3:20
Beating the Seeing at Keck, 1:18
Beta Pictoris: Younger Than Ever, 4:21
Better Solar-Storm Forecasting, 1:26
Big Chunk of Mars, A, 1:22
Big Jupiter in an Earth-like Orbit, A, 5:24
Bok Globules in Another Galaxy, 1:19
Bridging the Gap with Proto-Planetary Nebulae, 4:17
Chandra's Debut Delayed, 1:17
Chandra's Stellar Debut, 5:16
Changing Galaxy Shapes, 5:24
Clocking the Cat's Eye, 6:22
Cluster-Age Conundrum, 6:22
Collins and *Columbia* Launch Chandra, 4:16
Cometary Constancy, 3:19
Defrosting Dunes on Mars, 5:25
Do Magnetars Measure Up? 4:24
Dwindling Deuterium, 6:24
18th Moon for Uranus, An, 3:23
Energetic Evidence for Hypernovae, 1:16
Eta Carinae's Latest Antics, 2:24
Europan Cracks Tied to Tides, 6:17
European Radio Astronomers Sign Pact with Iridium, 3:20
Far-Out Brown Dwarf, A, 5:21
Gamma-Ray Bursts Pointed Our Way? 2:20
Gemini North Sees the Light, 3:18
Generating Gamma-Ray Bursts, 5:18
Getting a Feel for Braille, 4:28
Giant SETI Radio Telescope Planned, 1:22
Hubble Images Show Starbirth and Death, 6:20
Hubble Weighs In on the Universe's Expansion, 2:16
Hubble Zeroes In on Fornax A, 1:17
Intergalactic Starburst in Stephan's Quintet, An 1:24

Lights over Stellafane? *3*:21
Long Way Home for GRB 970228, A, *2*:21
Lunar Core at Last, A, *2*:17
Lunar Prospector's Flashy Finale, *4*:29
M80's Bounty of Blue Stragglers, *4*:18
Mars's Magnetic Mystery, *2*:18
Measure of Eros, The, *1*:27
Measure of Hellas, The, *3*:22
Merger-Mad Galaxy Gathering, A, *5*:22
Meteorites on Mars, *4*:18
Methane Brown Dwarfs: Two's Company, Seven's a Crowd, *3*:26
Middleweight Black Holes, *3*:19
Moon's "Leonid" Tail, The, *4*:21
More Chemical Clues to Hale-Bopp's Birth, *3*:24
More Moons for Uranus, *6*:24
New Clue to Cosmic-Ray Origins, A, *4*:23
New Gamma-Ray-Burst Clue, *2*:20
New Nearby Star Cluster, *5*:22
New Neutrino Observatory Begins Work, *3*:27
New Redshift Record, *1*:18
Newfound Neighbor in Cetus, *3*:26
No Planets for Proxima Centauri, *2*:18
Novel Photon Detectors Debut, *5*:20
Orion's Flying Bullets, *6*:17
Polar Cyclone on Mars, *3*:22
Probing the History of High-Redshift Helium, *1*:26
Radio Dishes Scan Galactic Neighbor, *2*:22
Record-Setting Redshift Survey, *1*:21
Scanning the Universe with the Hobby-Eberly Telescope, *4*:24
Scrutinizing Pulsar Planets, *4*:26
Seafloor Stardust? *6*:21
Seeing Titan's Seas? *6*:23
Setback for the Extragalactic Distance Scale? A, *4*:20
Shot in the Dark, A, *5*:17
Solar Maximum: Problems and Opportunities, *6*:16
Stonehenge Makeover, A, *2*:23
Stormy Outlook for the Leonid Meteors? A, *2*:22
Sunspot-Climate Link? A, *5*:18
Supermassive Star Clusters in the Galactic Center, *4*:22
Swallowed-Up Solar Systems? *4*:28
Three-Planet Solar System Discovered, *1*:20
Two Extreme Asteroids, *6*:26
Unwinding the Helix Nebula, *3*:24
Updating the Fate of the Universe, *1*:23
Vermont Prison Passes Vote Again, *6*:18
Wilson Award Winners for 1999, *4*:26
X-ray Pulsar Pinpointed in Puppis, *1*:24

Observer's Log —
Amateur's Night on Mount Wilson, An, *1*:115
Binocular Doubles for Autumn Skies, *4*:118
Chasing Eclipse Mysteries, *5*:121
Deep-Sky Notebook, *1*:119, *2*:122, *3*:124, *4*:123, *5*:124, *6*:126
Great Total Eclipse, The, *5*:118
Lunar Notebook, *1*:122, *2*:120, *3*:127, *4*:122, *5*:126, *6*:124
Jupiter's Deep Mystery, *6*:118
Observer's Notebook, *1*:124, *2*:124, *3*:128, *4*:126, *5*:118, *6*:127
Strange Eclipses, *2*:116
TLP Myth, The: A Brief for the Prosecution, *3*:118

Rambling Through the Skies, *1*:93, *2*:95, *3*:93, *4*:93, *5*:95, *6*:92

Software Showcase, *1*:76, *2*:76, *3*:82, *4*:74, *5*:74, *6*:73

Spectrum, *1*:8, *2*:8, *3*:8, *4*:8, *5*:8, *6*:8

Telescopes Plus —
S&T Test Report: First Look, A: SBIG's Enhanced ST-7E CCD Camera, *2*:64
Good Mount Gets Better, A, *5*:60
S&T Test Report: Less Magnification for Photography, *1*:67
S&T Test Report: Magnetic Star-Finding Machine, A, *3*:68
S&T Test Report: Meade's ETX-125EC — A First Look, *4*:61
S&T Test Report: More Magnification for Observing, *1*:66
S&T Test Report: Robotic Telescopes for the Masses, *3*:64
S&T Test Report: Solar Filters: Which Is Best? *1*:63
S&T Test Report: Trio of Refractors, A, *5*:57
S&T Test Report: Video of the Stars, *2*:61

Telescope Techniques —
Balancing Act for Dobsonian Telescopes, A, *5*:130
Improving Dobsonian Motion, *4*:128
Mersenne Telescope, The, *3*:130
New Twist on Tilted-Mirror Telescopes, *1*:128
Observatories of *Sky & Telescope*, The, *6*:133
Wolanski Ultralight Telescope, The, *2*:128

subjects

Amateur activities: Astro Alert news service, *2*:34; Centro de Observação Astronómica no Algarve, *2*:88; determining orbit for threatening asteroid, *4*:17; discovery of faint moving star in Hercules, *4*:126; Florida Imaging Center, *2*:86; François-Xavier Bagnoud Observatory, *2*:89; following up neutrino bursts to find supernovae, *2*:31; growing popularity of viewing total solar eclipses, *5*:10; imaging quasars, *4*:126; inns for astronomers, *2*:84; Johnson Space Center Astronomical Society, *6*:85; monitoring changes in Jupiter's South Equatorial Belt, *6*:118; New Mexico Skies Guest Observatory, *2*:86; Northeast Astronomy Forum, *2*:8; *3*:90; owning excess equipment, *4*:10; Skywatcher's Inn, *2*:84; SKY T*REX, *2*:87; spouses at stargazing events, *1*:10; Spreeufontein, *2*:89; Star Hill Inn, *2*:85; Stellafane, *2*:8; *3*:21; *4*:8, 88, 104; *6*:18; using Mount Wilson 60-inch telescope, *1*:115; Starfest convention, *1*:91; viewing Omega Centauri from midnorthern latitudes, *2*:124; *4*:126; Wilson Award comet discoverers for 1999, *4*:26

Archaeoastronomy: renovations to begin at Stonehenge, *2*:23

Asteroids (minor planets): amateur/professional workshop, *3*:89; 9969 Braille, *4*:28; 75 Eurydike, *1*:124; fastest spinning, *6*:28; 346 Hermentaria, *2*:114; 112 Iphigenia, *2*:113; 1998 KY26, *6*:26; 1995 WY_2, *3*:115; 1999 AN_{10}, *4*:17; 1999 JM_8, *6*:26; 150 Numa, *6*:116; 194 Prokne, *3*:115; size and mass of 433 Eros, *1*:27; Torino scale for impact threat, *4*:32

Astronomical constants: cosmological constant, *1*:23; *2*:24; *3*:44; *6*:18; Hubble parameter, *2*:16

Astronomy and society: apocalyptic signs and predictions, *5*:95; *6*:92; astronomer on currency, *3*:14; astronomical misconception Web site, *5*:72; reactions to total solar eclipses, *5*:10; Star of Bethlehem, *6*:77; Torino scale for impact threat, *4*:32; year 2000 and the new millennium, *6*:8, 70, 92

Atmospheric phenomena: aureole, *5*:104; cloud coronas, *5*:104; *6*:104; halo effects, *1*:104; of Mars, *6*:60; sun pillars and Constantine's cross in the sky, *4*:12

Balloon astronomy: BOOMERanG, *3*:48

Bioastronomy: Mars and life on other worlds, *3*:84; nanobacteria, *3*:40; panspermia, *3*:33; planned SETI radio telescope, *1*:22; Project Argus, *1*:22; SETI@home project, *4*:68, 73; *6*:14; spurious similarity of interstellar dust and bacteria spectra, *6*:12

Black holes: see ***Collapsed objects***

Calendars: year 2000 and the new millennium, *6*:8, 70, 92

Collapsed objects: anomalous X-ray pulsars, *1*:34; black hole in NGC 4342, *4*:22; decomposing neutron star could produce gamma-ray burst, *5*:18; life cycle of neutron stars and pulsars, *1*:30; magnetars, *1*:35; *4*:24; midsize black holes, *3*:19; planets around pulsar, *4*:26; pulsar in Puppis A supernova remnant, *1*:24; surface detail on pulsar, *1*:37; soft gamma-ray repeaters, *1*:34

Comets: carbon monoxide in, *3*:24; Hale-Bopp (C/1995 O1), *2*:124; *3*:24; Lee (C/1999 H1), *1*:112; *2*:124; *6*:129; LINEAR (C/1998 M5) standstill, *2*:12; panspermia, *3*:33; rate of visibility for naked eye, *3*:19; Wilson Award winners for 1999, *4*:26

Computing: Internet-based astronomy software, *5*:67; needed utility software, *3*:75; paths of solar-eclipse totality, *2*:69; SETI@home project, *4*:68, 73; simulating halo phenomena of Mars's atmosphere, *6*:60; voice-activated software for controlling telescopes, *6*:66

Constellation study: Aries, *2*:95; Capricornus, *1*:93; Coathanger asterism, *3*:101; miniature asterisms near Summer Triangle, *3*:98; zodiac and biblical flood, *2*:14

Cosmic background radiation: fluctuations measured, *3*:44

Cosmic rays: origin in supernova acceleration? *4*:23

Cosmology: density of baryons, *6*:24; discrepant distances to M106, *4*:20; evidence and effects of cosmological constant, *1*:23; *2*:24; *3*:44; *6*:18; evidence for matter-antimatter asymmetry, *4*:27; helium ionized in early universe, *1*:26; Hubble parameter value from Hubble Space Telescope Key Project on the Extragalactic Distance Scale, *2*:16; topology of the universe, *1*:44

Dark matter: cosmic deuterium, *6*:24; neutrinos as, *6*:26

Detectors: high-speed superconducting spectrometer, *5*:20

Eclipses:
Lunar: July 28, 1999, partial, *1*:108
Solar: August 11, 1999, total, *2*:108; *5*:8, 118; color of corona, *2*:116; *5*:121; growing popularity of viewing, *5*:10; paths of totality covering entire Earth, *2*:69; *6*:14; photographing, *1*:136; viewing lunar features during totality, *5*:12, 121; unusual phenomena during, *2*:116; *5*:12, 121

Education: NASA Internet resources, *3*:80; *Star Gazer* TV show, *4*:84

Galaxies: barred spirals as evolutionary stage, *5*:24; evolution of, *5*:24; largest redshift survey, *1*:21; redshift of 6.68 measured, *1*:18
Active: NGC 1316 (Fornax A), *1*:17
Clusters of: Abell 1060, *4*:125; Abell 3536, *4*:125; Abell 3565, *4*:125; Abell 3574, *4*:125; Abell 3656, *4*:125; Abell 3744, *4*:125; Abell 4038, *4*:123; merging galaxies in, *5*:22; NGC 1023 group, *6*:126
Interacting: merging galaxies in cluster, *5*:22; NGC 6872, *3*:20; starburst in Stephan's Quintet, *1*:24
Local Group (see also *Milky Way* and ***Magellanic Clouds***): Cetus dwarf discovered, *3*:26
Milky Way: full panorama image, *5*:137

"Normal": IC 239, *6*:127; M106, *4*:20; NGC 55, *5*:106; NGC 253, *5*:106; NGC 300, *5*:106; NGC 891, *6*:126; NGC 925, *6*:127; NGC 949, *6*:127; NGC 959, *6*:127; NGC 1003, *6*:128; NGC 1023, *6*:127; NGC 1058, *6*:128; NGC 4603, *2*:16; NGC 4945, *3*:56; NGC 6946, *4*:100; UGC 1807, *6*:126; UGC 2034, *6*:128

Gamma-ray astronomy: burst origin in decomposition of neutron star, *5*:18; evidence of bursters associated with supernovae, *2*:20; polarized light from burster, *2*:20; redshift of burster host galaxy, *2*:21

Herbig-Haro objects: HH 32, *6*:20

History: Abraham Lincoln and the 1833 Leonid storm, *5*:34; life and work of John E. Mellish, *5*:84; Moon observations by Leonardo da Vinci, *4*:40; Star of Bethlehem, *6*:77

Hubble Space Telescope: blue stragglers in M80, *4*:18; core of NGC 1316 (Fornax A), *1*:17; cyclone on Mars, *3*:22; image of NGC 4603, *2*:16; Key Project on the Extragalactic Distance Scale, *2*:16; massive, young star clusters in galactic center, *4*:22; NGC 3603, *3*:50; proto-planetary nebula Henize 401, *4*:17; stages of stellar evolution, *3*:50; third servicing mission, *4*:30; Trifid Nebula, *3*:52

Imaging:
Astrophotography: total solar eclipses, *1*:136
Charge-coupled devices (CCDs): diagnosing mistakes, *5*:72; spectroscopy, *2*:135; using video camera, *2*:12
Image processing: creating Milky Way panorama, *5*:137; digitally combining exposures, *4*:135

Infrared astronomy: image of Titan's disk, *6*:23

Interferometry: details of aperture synthesis, *6*:41; with Keck telescope, *1*:18; very-long-baseline, *6*:36

Interstellar matter: high-speed gas in Orion Nebula, *6*:17; spurious similarity of interstellar dust and bacteria spectra, *6*:12

Light pollution: New Jersey study commission, *2*:104; Stellafane threatened by prison construction, *3*:21; *4*:8, 88, 104; *6*:18

Magellanic Clouds: Bok globules LMC, *1*:19; radio map of SMC, *2*:22

Masers: in M106, *4*:20

Meteorites: ALH 84001, *3*:33, 40; Allende, *3*:42; Dar al Gani, *1*:22; from Mars, *1*:22; on Mars surface, *4*:18; pilot finding on Saharan table mountain, *6*:14; panspermia, *3*:33; of Saint-Exupery, *6*:14

Meteors: Alpha Lyrid shower, *1*:112; Geminid shower, *6*:115; Leonid shower, *2*:22; *4*:21; *5*:29, 34, 95; Orionid shower, *4*:116; Perseid shower, *2*:113; sodium tail produced by Leonid impacts, *4*:21; Taurid shower, *5*:114

Millimeter and submillimeter astronomy: first acoustic peak detected in microwave background, *3*:44

Moon: Ariadaeus Rille, *5*:126; da Vinci crater, *4*:44; Hyginus Rille, *5*:126; Internet resources, *2*:73; Linné crater, *3*:127; Lunar Prospector crash, *4*:29; iron-rich core, *2*:17; observations by Leonardo da Vinci, *4*:40; Plato crater, *1*:122; rays, *2*:120; *4*:122; Sinus Iridum, *6*:126; sodium tail, *4*:21; tidal friction, *1*:14; transient lunar phenomena, *3*:118; Triesnecker Rille, *5*:126; true color of, *3*:14; Tycho crater, *2*:120; viewing opposing morning and evening crescents, *3*:128; water on? *4*:29

Nebulae:
Bright: IC 4606, *1*:58; M1 (Crab), *1*:30; M20 (Trifid), *3*:50; M42 (Orion), *6*:17; NGC 2261 (Hubble's Variable), *6*:20; NGC 7000, *4*:101
Dark: Barnard 111, *3*:111; Barnard 127, *3*:110; Barnard 129, *3*:110; Barnard 130, *3*:110; Barnard E (Triple Cave), *3*:100; Bok globules in Large Magellanic Cloud, *1*:19; Le Gentil 3, *4*:101
Planetary: Abell 70, *2*:124; Henize 1-6, *2*:123; Henize 401, *4*:17; Humason 1-2, *2*:123; IC 1454, *3*:125; IC 5148/50, *3*:124; IC 5217, *2*:123; Jones 1, *3*:125; M27, *3*:102; Merrill 2-2, *2*:123; Minkowski 2-9, *2*:122; Minkowski 2-51, *3*:125; NGC 2346, *6*:20; NGC 2440, *6*:20; NGC 3603, *3*:50; NGC 6543 (Cat's Eye), *6*:22; NGC 6751, *3*:110; NGC 6826, *4*:102; NGC 7293 (Helix), *3*:24; structure of in three dimensions, *3*:24; Vyssotsky 2-3, *3*:125

Neutrino astronomy: mass of, *6*:26; neutrino outbursts, *2*:31; Sudbury Neutrino Observatory opens, *3*:27

Neutron stars: see ***Collapsed objects***

Observatories:
Amateur and public: Edwin Aguirre and Imelda Joson's backyard dome, *6*:136; Centro de Observação Astronómica no Algarve, *2*:88; Dennis di Cicco's three-story roll-off roof, *6*:133; Florida Imaging Center, *2*:86; François-Xavier Bagnoud, *2*:89; Alan MacRobert's roll-off roof, *6*:140; New Mexico Skies Guest Observatory, *2*:86; Roger Sinnott's "flapping roof," *6*:138; Skywatcher's Inn, *2*:84; SKY T*REX, *2*:87; Spreeufontein, *2*:89; Star Hill Inn, *2*:85
Professional: Mount Maidanak, Uzbekistan, *6*:12; Sudbury Neutrino, *3*:27; Suyapa, Honduras, *1*:12; Very Large Array, *6*:39; Very Long Baseline Array, *6*:36; Wyoming Infrared, *4*:90

Observing techniques: double stars using binoculars, *4*:118; Leonid meteors, *5*:33; making variable-star magnitude estimates, *6*:110; record "empty" magnification, *3*:129; viewing outer planets' outer moons, *4*:109

Occultations: September 29–30, 1999, Aldebaran, by Moon, *4*:114; stellar, by minor planet 75 Eurydike, *1*:124

Online databases and communications (see also ***Computing***): AstroAlert news service, *2*:34; astronomical equipment Web sites, *1*:75; Internet-based astronomy software, *5*:67

Optics: collimating tilted-mirror telescope, *1*:128; donating old binoculars, *3*:8; making thin 16-inch mirror, *2*:132

Organizations: International Dark-Sky Association, *3*:89; Manomet/Birders' Exchange, *3*:8

People: Archinal, B. A., *5*:89; Ambartsumian, V. A., *3*:14; Baker, L., *1*:89; da Vinci, L., *4*:40; Horkheimer, J., *4*:84; Lincoln, A., *5*:34; Marín, L. A., *1*:85; Mellish, J. E., *5*:84; Muñoz, O., *1*:85; Rey, H. A., *3*:10; Townsend, M., *1*:14; Tuthill, R. W., *6*:88; Tyler, R., *2*:91

Planets and their satellites:
Earth (see also ***Moon***): cause of tidal friction, *1*:14; climate link to solar activity, *5*:18; effects of modest impact events, *5*:48; effects of solar maximum, *6*:16; iron-60 originating with supernovae, *6*:21; Meteor Crater, *5*:48; monuments at the equator, *1*:84
Extrasolar: in Earth-like orbit around Iota Horologii, *5*:24; no evidence for planets around Proxima Centauri, *2*:18; three-planet system of Upsilon Andromedae, *1*:20; around pulsar, *4*:26
Jupiter: 1:40; Callisto, *1*:40; cyclical changes to South Equatorial Belt, *6*:118; Europa, *1*:42; *5*:17; *6*:17; Ganymede, *1*:40; Himalia, *4*:109; *6*:128; Io, *1*:42; ring system, *5*:17
Mars: 1:124; ancient seas, *5*:38; cyclone near north pole, *3*:22; detailed topographic map, *3*:22; evidence for meteorites on, *4*:18; halo phenomena in atmosphere, *6*:60; ice sublimating off dunes, *5*:25; inaccurate colors in Viking photographs, *1*:12; magnetic stripes and possible geological activity, *2*:18; source of life of Earth, *3*:33; true color of, *1*:12; *3*:14
Mercury: November 15–16, 1999, solar transit, *5*:108
Neptune: Triton, *4*:111
Saturn: adaptive-optics view of Titan, *1*:18; Hyperion, *4*:110; Iapetus, *4*:110; Titan, *6*:23
Uranus: Ariel, *4*:111; new satellites, *3*:23; *6*:24; Oberon, *4*:110; Sycorax, *6*:128; Umbriel, *4*:111; Titania, *4*:110
Venus: historical guesses of surface conditions, *4*:93

Pulsars: see ***Collapsed objects***

Radar astronomy: high-resolution images of near-Earth asteroids, *6*:26

Radio astronomy: Iridium time-sharing with European observatories, *3*:20; map of Small Magellanic Cloud, *2*:22; very-long-baseline interferometry, *6*:36

Sky lore: Antares, *3*:93; Aries, *2*:95; Scorpius and Orion, *3*:93; Capricornus, *1*:93

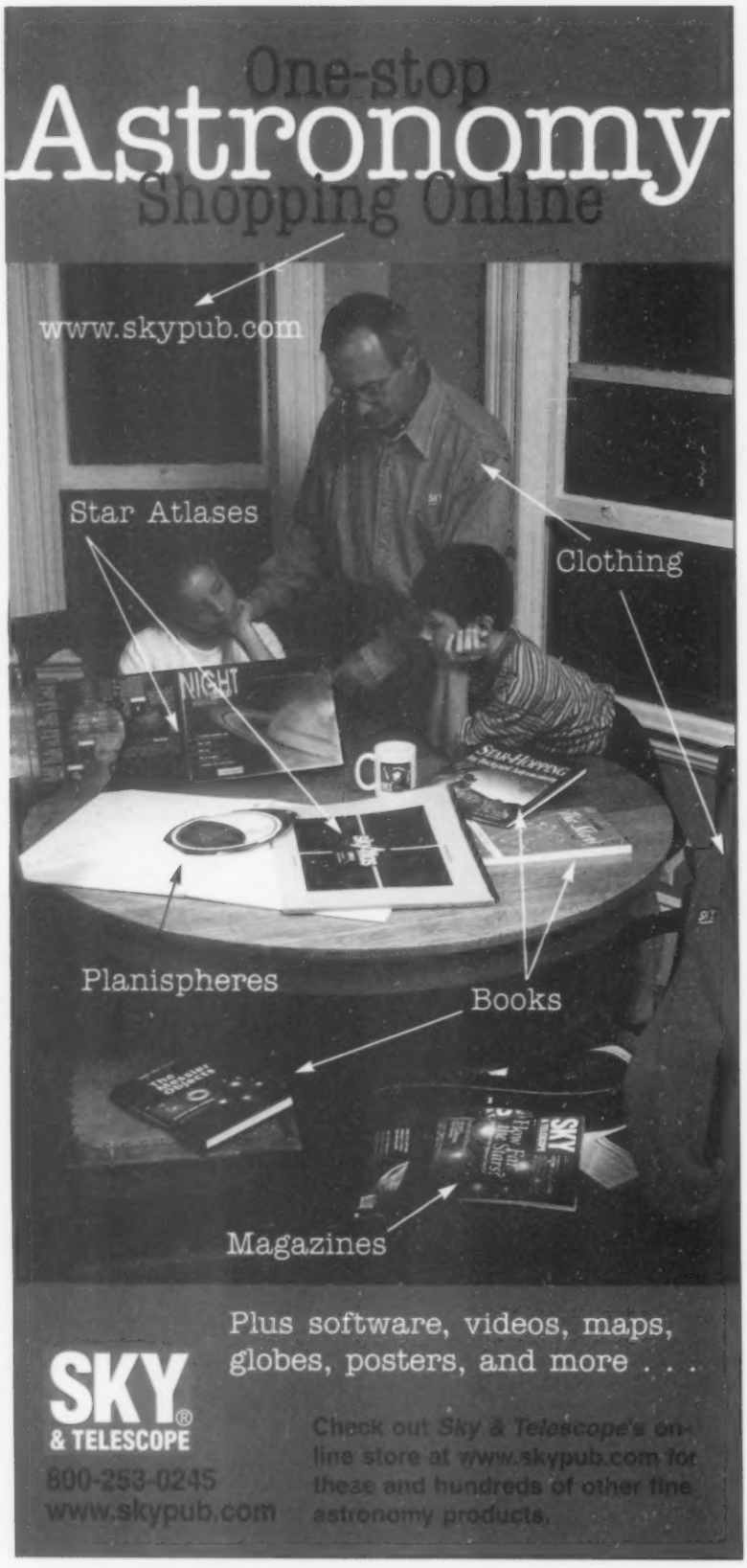
Solar system: largest impact basin, *3*:22

Spacecraft (see also ***Hubble Space Telescope***): A Broadband Imaging X-ray All-sky Survey (ABRIXAS), *2*:28; *4*:30; Advanced Composition Explorer (ACE), *4*:23; Astro E, *2*:56; Cassini, *1*:28; *5*:26; *6*:129; Champollion (Deep Space 4), *2*:28; *4*:30; Chandra X-ray Observatory, *1*:17; *2*:44, 54; *4*:16; *5*:16; Cosmic Background Explorer (COBE), *3*:44; Deep Space 1, *3*:30; *4*:28; Far Infrared and Submillimeter Telescope (FIRST), *1*:28; Far Ultraviolet Spectroscopic Explorer (FUSE), *3*:30; *6*:28; Galileo, *1*:40; *2*:28; *4*:30; *5*:17; *6*:28; Giotto, *4*:30; Lunar A, *4*:30; Lunar Prospector, *3*:30; *4*:29; Mars Climate Orbiter, *5*:26; *6*:28; Mars Express, *1*:28; Mars Global Surveyor, *1*:12; *2*:18, 28; *3*:22; *5*:25; Mars Polar Lander, *6*:28, 61; Mir, *3*:30; *5*:26; *6*:10; Microwave Anisotropy Probe, *3*:45; Near Earth Asteroid Rendezvous (NEAR), *1*:27; Planck, *1*:28; *3*:48; Transition Region and Coronal Explorer (TRACE), *4*:56; Wide-field Infrared Explorer (WIRE), *4*:30; X-ray Multi-Mirror Mission, *2*:56

Space policy: NASA's budget reduced, *5*:26

Star clusters: discovery of nearby Eta Chamaeleontis, *5*:22; lithium as indication of age, *6*:22
Associations: Alpha Persei, *6*:22; False Comet in Scorpius, *1*:102
Globular: M4, *1*:101, 119; M9, *1*:119; M22, *1*:121; M80, *1*:101; *4*:18; NGC 6144, *1*:119; NGC 6342, *1*:120; NGC 6356, *1*:120; NGC 6522, *1*:120; NGC 6528, *1*:120; NGC 6712, *3*:112; NGC 6934, *3*:18; Omega Centauri, *2*:124
Open: Arches, *4*:22; Basel 1, *3*:111; IC 1396, *5*:124; IC 2391, *6*:22; M6, *1*:102; M7, *1*:102; M11, *3*:110; M26, *3*:112; M29, *4*:102; M39, *4*:101; M45 (Pleiades), *6*:22; M52, *5*:101; M103, *6*:102; massive, young in galactic center, *4*:22; NGC 457, *6*:101; NGC 663, *6*:102; NGC 654, *6*:102; NGC 659, *6*:102; NGC 6231, *1*:102; NGC 6704, *3*:111; NGC 6939, *4*:100; NGC 6940, *3*:102; NGC 7789, *5*:101; Quintuplet, *4*:22; Stock 12, *5*:102; Trumpler 24, *1*:102

Stars: activity cycles, *4*:47; binary brown dwarf DENIS-P J1228.2–1547, *2*:17; blue stragglers, *4*:18; distant brown dwarf, *5*:21; evolution, *3*:50; methane brown dwarfs, *3*:26; signs of red giants enveloping planets, *4*:28; X-ray studies of coronal activity, *4*:46
Double and multiple: Albireo, *3*:101; 56 Androm-



edae, *4*:121; 30 Arietis, *4*:120; Lambda Arietis, *4*:120; Eta Cassiopeiae, *6*:101; Iota Cassiopeiae, *6*:102; 16 Cygni, *4*:119; 61 Cygni, *4*:102, 119; 79 Cygni, *4*:120; Omicron^1 Cygni, *4*:120; dust spiral around, *1*:18; Herschel 50, *3*:111; Beta Lyrae, *4*:119; Delta Lyrae, *4*:119; Epsilon Lyrae, *2*:100; Zeta Lyrae, *2*:100; *4*:119; I Pegasi, *4*:120; 33 Pegasi, *4*:120; 85 Pegasi, *4*:120; Epsilon Pegasi, *4*:120; Zeta Piscium, *4*:120; Psi^1 Piscium, *4*:120; Polaris, *4*:121; Theta Sagittae, *4*:120; Epsilon Sagittae, *4*:120; Beta Scorpii, *1*:101; Zeta Scorpii, *1*:102; Nu Scorpii, *1*:102; Struve 2388, *3*:112; Struve 2391, *3*:111; Struve 2521, *3*:102; Struve 2816, *5*:102, 124; Struve 2819, *5*:102, 124; WR 104, *1*:18

Individual: Anser, *3*:101; Antares, *1*:58; *3*:93; 12 Aquilae, *3*:110; Lambda Aquilae, *3*:108; blue supergiant Sher 25, *3*:50; RS Canum Venaticorum class, *4*:50; Beta Pictoris's age, *4*:21; 18 Scorpii, *1*:100; Eta Scuti, *3*:110

Variable: V Aquilae, *3*:109; AL Arietis, *6*:109; DP Camelopardalis, *6*:110; Eta Carinae brightening, *2*:24; Delta Cephei, *5*:102; Mu Cephei, *5*:102, 124; DG Ceti, *6*:109; DS Ceti, *6*:109; eclipsing binaries, *6*:108; FU Eridani, *6*:109; V1366 Orionis, *6*:110; TX Piscium, *5*:100; V366 Puppis, *6*:110; BM Scorpii, *1*:102; R Scuti, *3*:111; Delta Scuti, *3*:111; T Tauri class, *4*:50; V1125 Tauri, *6*:110; UZ Volantis, *6*:110

Sun: activity and Earth climate link, *5*:18; comparison to other stars, *4*:47; corona imaged in ultraviolet light, *4*:56; predicting coronal mass ejections, *1*:26; solar maximum, *6*:16; X-ray studies of coronal activity, *4*:46

Supernovae: field guide to spectra, *2*:140; finding with neutrino outbursts, *2*:31; hypernovae, *1*:16; iron-60 from found on Earth, *6*:21; origin of cosmic rays? *4*:23; as standard candles for galaxy distances, *6*:18; types, *2*:140

Telescope making: improving Dobsonian motion with Telflon Sheet, *4*:128; lightweight 16-inch Dobsonian, *2*:128; making simple refractors for students, *2*:91; Mersenne, *3*:130; spring system for balancing Dobsonian, *5*:130; thin 16-inch mirror, *2*:132

Telescopes:

Amateur: Clyde Bone's 20- and 30-inch Mersenne reflectors, *3*:130; John Francis's tilted-component, spherical-mirror NEWTRYAD, *1*:128; Tom Krajci's 16-inch f/6 Dobsonian, *5*:130; Martin Lewis's 18-inch truss-tube Dobsonian, *4*:128; Rico Tyler's student refractors, *2*:91; Gary Wolanski's 16-inch lightweight Dobsonian, *2*:128

Professional: Cosmic Anisotropy, *3*:48; Cosmic Background Imager, *3*:48; Gemini North (8.1-meter), *3*:18; Hobby-Eberly, *4*:24; Keck (10-meter), *1*:18; Mount Wilson (60-inch), *1*:115; One Hectare, *1*:22; Very Large (8.2-meter) named Antu, Kueyen, Melipal, Yepun, *3*:20

Timekeeping: equatorial solar chronometer, *1*:86

Ultraviolet astronomy: image of solar corona, *4*:56

Vision: LASIK refractive eye surgery, *4*:14

X-ray astronomy: Cassiopeia A, *5*:16; history of solar and stellar detections, *4*:46; first images from Chandra X-ray Observatory, *5*:16; image of Hyades, *4*:53; potential of Chandra X-ray Observatory, *2*:44; predicting Sun's coronal mass ejections, *1*:26